CLAIMS

1. A method for transcoding an audio/video (A/V) stream, the method comprising:

dividing a compressed digital A/V stream into audio and
5 video data;

transcoding the divided video data;

synchronizing the divided audio data with the transcoded video data; and

packetizing the synchronized audio and video data into a
10 digital A/V stream.

2. The method according to claim 1, wherein the transcoding comprises reducing a bit rate of the video data.

15   3. The method according to claim 2, wherein the bit rate of the video data is reduced by reducing at least one of a frame size, a frame quality and a frame rate of the video data.

4. The method according to claim 1, wherein the digital A/V
20 stream is compressed based on an MPEG standard.

5. The method according to claim 4, wherein the divided audio data is synchronized with the transcoded video data by matching Presentation Time Stamps (PTSs) of the audio and video
25 data.

6. The method according to claim 5, wherein original PTSs of video data before the video data is transcoded are used for the transcoded video data.
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7. The method according to claim 5, wherein new PTSs are

used for the transcoded video data, and PTSs of the audio data are updated based on the new PTSs.

8. The method according to claim 7, wherein a start PTS value of the PTSs of the audio data is replaced with a start PTS value of the new PTSs of the transcoded video data, and the other PTS values of the PTSs of the audio data are updated based on the difference between the start PTS value of the new PTSs of the transcoded video data and the start PTS value of the PTSs of the audio data.

9. The method according to claim 7 or 8, wherein the transcoding and the synchronizing are performed on a section-by-section basis, each section having continuous PTS values.

10. The method according to claim 1, further comprising temporarily storing the divided audio data before synchronizing the divided audio data with the transcoded video data.

11. The method according to claim 10, wherein the size of a buffer for temporarily storing the audio data is determined based on both a time required to transcode the video data and a bit rate of the audio data.

12. The method according to claim 1, further comprising recording the packetized digital A/V stream in a recording medium.

13. The method according to claim 1, further comprising transmitting the packetized digital A/V stream.

14. The method according to claim 1, wherein the compressed

digital A/V stream is received via a digital broadcast or input through a multimedia player.

15. An apparatus for transcoding a digital audio/video (A/V) stream, the apparatus comprising:

a demultiplexer for dividing a compressed digital A/V stream into audio and video data;

a buffer for temporarily storing the divided audio data;

a transcoder for transcoding the divided video data;

a synchronizer for synchronizing the divided audio data with the transcoded video data; and

a packetizer for packetizing the synchronized audio and video data into a digital A/V stream.

16. The apparatus according to claim 15, wherein the transcoding comprises reducing a bit rate of the video data, and the bit rate of the video data is reduced by reducing at least one of a frame size, a frame quality and a frame rate of the video data.

17. The apparatus according to claim 15, wherein original PTSs of the video data before the video data is transcoded are used for the transcoded video data to synchronize the divided audio data with the transcoded video data.

18. The apparatus according to claim 15, wherein new PTSs are used for the transcoded video data, and PTSs of the divided audio data are updated based on the new PTSs to synchronize the divided audio data with the transcoded video data, and wherein the transcoding and the synchronizing are performed on a section-by-section basis, each section having continuous PTS values.

19. The apparatus according to claim 18, wherein a start PTS value of the PTSs of the audio data is replaced with a start PTS value of the new PTSs of the transcoded video data, and the other PTS values of the PTSs of the audio data are updated based on the difference between the start PTS value of the new PTSs of the transcoded video data and the start PTS value of the PTSs of the audio data.

20. The apparatus according to claim 15, wherein the size of a buffer is determined based on both a time required to transcode the video data and a bit rate of the audio data.

21. The apparatus according to claim 15, further comprising:
a digital broadcast receiver for receiving the compressed digital A/V stream via a digital broadcast; and
a recorder for recording the packetized digital A/V stream in a recording medium.

22. The apparatus according to claim 15, further comprising a transmitter for transmitting the packetized digital A/V stream to a client computer through a communication network.